Baton Rouge Community College
Academic Affairs Master Syllabus

Date Approved or Revised: September 18, 2007

Course Name: General Biology I Lab
Course Number: BIOL 101L

Lecture Hrs. 0 **Lab Hrs. 2** **Credit Hrs. 1**

Course Description: Provides a laboratory component that enhances and follows the sequence of material in BIOL 101. Not intended for science majors.

Prerequisites: BIOL 101 with a grade of C or better
Co-requisites: BIOL 101

Suggested Enrollment Cap: 30

Learning Outcomes: Upon successful completion of this course, the student will be able to:

- Demonstrate a fundamental understanding of laboratory methods and practices of general biology in the areas of safety, microscopy, chemical analysis, measurement, genetics, and biotechnology;
- Relate the theoretical knowledge of general biology concepts gained from Biology 101 lecture to the practical hands-on discovery of those concepts in the laboratory setting;
- Use the scientific method to conduct and interpret basic laboratory experiments relevant to course content and to write concise and comprehensive laboratory reports in standard English;
- Gather data and record adequate notes in a laboratory manual/notebook while conducting scientific experiments;
- Use computer technology to access, retrieve, process, organize, and communicate data and information relevant to course content;
- Interpret biological images, scientific graphs and models used to illustrate general biology concepts;
- Use cooperative learning and team problem-solving approaches in laboratory activities.

Assessment Measures: Assessment of all learning outcomes will be measured using the following methods:

- Individual instructor -designed exams will collectively assess a portion of the learning outcomes and will be administered during the semester as listed in a department-generated schedule.
- An individual instructor-designed comprehensive final exam, adhering to a department-determined common content, will assess a portion of the learning outcomes will be administered at the end of the semester.

- Individual instructor-designed or collaborative instructor-designed assignments will assess a portion of the learning outcomes and will be given as a portion of the total grade. Assignments may include oral and written assignments, laboratory reports, projects, homework, and quizzes; all assignments will be graded using an instructor-designed rubric.
- Student data gathering and record keeping skills will be evaluated by instructor observation of the student laboratory manual/notebook using an instructor-designed rubric.

Information to be included on the Instructors' Course Syllabi:

- ***Disability Statement*:** Baton Rouge Community College seeks to meet the needs of its students in many ways. See the Office of Disability Services to receive suggestions for disability statements that should be included in each syllabus.

- ***Grading:*** The College grading policy should be included in the course syllabus. Any special practices should also go here. This should include the instructor's and/or the department's policy for make-up work. For example in a speech course, "Speeches not given on due date will receive no grade higher than a sixty" or "Make-up work will not be accepted after the last day of class."

- ***Attendance Policy*:** Include the overall attendance policy of the college. Instructors may want to add additional information in individual syllabi to meet the needs of their courses.

- ***General Policies*:** Instructors' policy on the use of things such as beepers and cell phones and/or hand held programmable calculators should be covered in this section.

- ***Cheating and Plagiarism*:** This must be included in all syllabi and should include the penalties for incidents in a given class. Students should have a clear idea of what constitutes cheating in a given course.

- ***Safety Concerns:*** In some programs this may be a major issue. For example, "No student will be allowed in the safety lab without safety glasses." General statements such as, "Items that may be harmful to one's self or others should not be brought to class."

- ***Library/ Learning Resources:*** Since the development of the total person is part of our mission, assignments in the library and/or the Learning Resources Center should be included to assist students in enhancing skills and in using resources. Students should be encouraged to use the library for reading enjoyment as part of lifelong learning.

Expanded Course Outline:

I. Introduction to Science Laboratory
   A. Laboratory Rules and Lab Safety
   B. Scientific Method
   C. Metric Measurement

II. Microscopy

A. Compound Light Microscope
B. Binocular Dissecting Microscope
C. Microscopic Observations

III. Chemistry of Life
A. PH, Acids, Bases, Buffers
B. Chemical Composition of Cells
C. Identification of Carbohydrates, Proteins and Lipids

IV. Cell Structure and Function
A. Types of Cells
B. Diffusion and Osmosis
C. Enzyme Activity
D. Photosynthesis
E. Cellular Respiration

V. Cell Reproduction and Inheritance
A. Mitosis and Meiosis
B. Mendelian Genetics
C. Human Genetics

VI. Molecular Biology
A. DNA Structure and Function
B. RNA Structure and Function
C. Biotechnology

VII. Evolution
A. Geological Time Scale and Evolutionary Events
B. Evidence for Evolution